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ABSTRACT

Interviews were conducted among 408 adults with acquired immunodeficiency syndrome at three local health departments to determine the proportion who owned pets, their perceived attachment to their pets, and the proportion who were informed about zoonoses. Nearly half (187, or 46%) were living with pets, most commonly dogs (64%), followed by cats (38%), fish (15%), birds (8%), reptiles (3%), and rodents (2%). Most pet owners (81%) reported an attachment to their pet. Only 10% were informed of zoonoses, albeit some incorrectly. Health care providers should recognize the high pet ownership rate among persons infected with human immunodeficiency virus and correctly inform their patients of strategies to sustain a low zoonotic disease incidence. (*Am J Public Health.* (1995; 85:1559–1561)

Pet Ownership among Persons with AIDS in Three Florida Counties

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Introduction

Nearly half of American households include pets.[1] Compelling evidence supports the value of companion animals, particularly for the elderly or infirm.[2,3] Notably, in many of the panels of the acquired immunodeficiency syndrome (AIDS) Quilt, animals are recognized. But because animals can also transmit infections, issues regarding hygiene and animal health must be addressed. Through interview and AIDS registry review, we examined the association of pet ownership with reported opportunistic infection(s), self-reported attachment to pets, and health care information about pet ownership among persons with AIDS residing in Florida.

Methods

In collaboration with the Centers for Disease Control and Prevention, Florida conducts the Supplement to HIV/AIDS Surveillance (SHAS) project in Dade (Miami area), Broward (Ft Lauderdale area), and Duval (Jacksonville area) counties. Adults (aged 18 and older) reported with AIDS who are patients of selected facilities are eligible for interview after informed consent is gained. Methods used by the Florida project have been described in detail elsewhere.[4]

From September 1993 through December 1993, surveillance project participants were asked the following questions to supplement the standardized questionnaire: (1) In the past 5 years, has there been a pet in your household? (2) What type of pet(s)? (3) How attached would

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TABLE 1—Characteristics of Study Subjects with AIDS, by Pet Ownership

	Pet Owners (n = 187)		Nonowners (n = 221)	
	No.	%	No.	%
Sex				
Male	136	73	162	73
Female	51	27	59	27
Race/ethnicity				
White	62	33	64	29
Black	94	50	125	57
Hispanic	31	17	32	14
Age group, y				
18–29	39	21	48	22
30–39	89	48	100	45
≥40	59	32	73	33
Mode of HIV transmission				
Homosexual activity (males)	84	45	87	39
Intravenous drug use	38	20	56	25
Homosexual activity (males) and intravenous drug use	9	5	12	5
Heterosexual activity	30	16	33	15
Blood/blood products exposure	4	2	2	1
Risk not identified	22	12	31	14
Employment				
Currently employed	45	24	59	27
Not employed	142	76	162	73
Education				
<12 y	44	24	65	29
≥12 y	143	76	156	71
Living situation				
Family or partner	125	67	144	65
Alone	27	14	31	14
Friends	27	14	37	17
Streets/shelter	5	3	5	2
Other	3	2	4	2

Note. P values are greater than .1 for all comparisons.

TABLE 2—Reported Opportunistic Conditions among Persons with AIDS, by Pet Ownership

Selected AIDS-Defining Opportunistic Infections[a]	Pet Owners (n = 187)		Nonowners (n = 221)	
	No.	%	No.	%
Candidiasis	43	23	52	24
Recurrent pneumonia	13	7	8	4
Coccidiomycosis	. . .		. . .	
Cryptococcosis	4	2	6	3
Cryptosporidiosis	3	2	1	<1
Histoplasmosis	2	1	3	1
Mycobacterium avium complex	3	2	5	2
Mycobacteria; other species	3	2	1	<1
Pneumocystis carinii pneumonia	47	25	52	24
Salmonella septicemia	. . .		1	<1
Toxoplasmosis of the brain	13	7	8	4

Note. P values are greater than .1 for all comparisons.
[a]Diseases common to animals and man; categories are not mutually exclusive.

you say you were/are to the pet? (4) Has anybody talked to you about diseases you could get from your pet? (5) To your knowledge, have you ever gotten a disease from the pet(s)? Data comparing pet owners with persons living without pets (nonowners) were analyzed using the chi-square test for significance.

Results

Of the 464 persons with AIDS who were approached, 408 (88%) agreed to be interviewed. This subset of persons interviewed was representative in age, race/ethnicity, sex, and exposure mode of all persons reported with AIDS from the three participating counties. The race/ethnicity of this population was 31% White, 54% Black, and 15% Hispanic. The aggregate data showed that men accounted for 73% of the interviewees. Of the men, 64% were younger than 40 years; of the women, 76% were below age 40. More than one quarter of the adults did not complete high school; two thirds were living with family or a partner.

Of those interviewed, 187 (46%) were living—or had lived—with a companion animal within the past 5 years. Sixty-four percent owned a dog, 38% owned cats, 15% owned fish, 8% owned birds, 3% owned reptiles, and 2% owned rodents—categories not mutually exclusive. Among pet owners, 25% were living with more than one type of animal; the most common combination was a dog and cat, reported by 14% of pet owners.

Overall, proportions of pet owners did not differ when compared with nonowners by sex, race/ethnicity, age group, human immunodeficiency virus (HIV) transmission mode, employment status, high school completion, or living situation ($P > .1$) (Table 1). Moreover, patients reported with specific, AIDS-defining diseases that may be common to animals and man were as likely to be pet owners as not (Table 2).

Most pet owners (81%) reported feeling some attachment to these animals. People living with more than one type of pet were more likely than single-pet owners to report an attachment to their favorite animal ($P = .031$).

Only 10% of pet owners were informed about zoonotic diseases by health care workers. Four were so informed because of presumed infections from pets: toxoplasmosis (n = 2), cat scratch disease (n = 1), and "parasites" (n = 1). Four others had information that was either incorrect or misunderstood; this included the notions that "AIDS can be transmitted by cats," "ringworm can be transmitted from cat feces," and "fleas can cause rabies." Four participants were told to remove cats from their households; how-

ever, each reported a strong attachment to their pet and resisted the advice.

Discussion

Nearly half of those interviewed were living with companion animals, consistent with the proportion in the general population.[1] In our sample, pet owners did not differ significantly from nonowners concerning several selected characteristics. For the health care community, knowing that a person with AIDS is likely to be a pet owner—regardless of whether that person injects drugs or is homeless—and that pet ownership is important to most individuals underscores the need to discuss proper animal care.

Consistent with findings of recent papers,[5–7] an increased risk of AIDS-defining opportunistic infections common to animals and man was not established among pet owners. Although two medical care professionals involved with our study participants assumed that their patients' toxoplasmosis infections were from pet cats, epidemiological findings suggest that toxoplasmosis antibody seroconversion is unrelated to cat exposure or ownership.[8,9] However, because AIDS case reports may not be updated with disease information after the initial report (which, since 1993, may only have immunological AIDS case-defining information[10]), we did not assess whether a person developed a zoonotic opportunistic disease later in the course of their HIV disease. Ascertaining zoonotic AIDS-defining infections is more complicated, given the 1993 expansion of the AIDS case definition, which has tended to accelerate the diagnosis of AIDS to the point before a zoonotic opportunistic disease develops.

Most HIV-infected pet owners we interviewed were not informed about zoonotic diseases; others received information that was incorrect or misleading. The ability of health care professionals to discuss the potential role of animals in infectious diseases varies; fewer than one quarter of those surveyed in one study were comfortable with their knowledge of zoonotic diseases.[11] As a result, it is apparent from documented and anecdotal cases that some workers err on the side of being overly conservative, recommending that the animal be removed from the household despite the possible angst it might cause the owner.[12] One participant became distraught over the possibility of losing his pet and told the interviewer he would rather "give up the doctor."

Rather than advising HIV-infected patients to give up their pets, health care workers should provide adequate and correct information concerning the risks (however minimal) of pet ownership among persons with AIDS. Health care workers must ensure their access to quality information on zoonoses and must be able to communicate this information effectively to patients to keep the risk of human infection minimal.[12,13] Patients who own pets should be properly advised to use reasonable caution when caring for their animal companions. A greater familiarity with zoonotic diseases would increase the comfort level of health care workers in assisting persons with AIDS to outline plans for both human and animal wellness. □

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